Appl. No. 10/711,789
Reply to Office action of June 12, 2007

REMARKS/ARGUMENTS

Request for Continued Examination:

The applicant respectfully requests continued examination of the above-indicated
5   application as per 37 CFR 1.114.

Additionally, in accordance with 37 CFR 1.313, withdrawal of the present application
from issue is respectfully requested as the RCE is filed prior to payment of the issue
fee.

10 **Amendments to the Claims**

Claims 49-70 are newly entered. Upon review, the applicant finds that claim
scopes of independent claims 27 and 38 are narrower than intended. Therefore,
independent claim 49 is newly added by cancelling certain limitations recited in claim
27. Similarly, independent claim 60 is newly added by cancelling certain limitations
15 recited in claim 38. Claims 50-59 and 61-70 correspond to claims 28-37 and 39-48,
respectively.

As no new matter is introduced, consideration of the above-identified claim
amendments is respectfully requested.

20 **Patentability of New Claims 49-70**

Claim 49

In the previous Office action dated 06/26/2006, Examiner stated that it would
have been obvious to one skilled in the art to provide the non-volatile memory of
25 Hawryluk (US Patent No. 6,303,917 B1) to the device of Suzuki (Publication No. U.S.
20040079864 A1) for the purpose of storing control instructions and sample data for
calculations. The applicant insists that Examiner's interpretations are incorrect.

Referring to Suzuki Fig. 6, the laser performance represents a mapping between
30 **current (control signal)** and **emitted laser power**. Therefore, in specification

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paragraphs [0052] and [0053], Suzuki teaches using the formulas,
Performance=$(P2-P1)/(IP2-IP1)$ and $IP3=IP1+(P3-P1)$/Performance, to estimate the
control-input signal IP3 required for the laser diode to generate a light beam having
the third light intensity level P3. However, Hawryluk's predetermined relation data is

5   indicative of a mapping between sample data level and **energy data level**, where the
sample data level is generated by the energy sensor (19) arranged for detecting the
second portion of the **radiant energy** (12") from the energy-tapping member (15)
which divides the radiant energy (12) received from the optical element (13) into
related first and second portions (12' and 12"). [Fig. 2; col. 4, lines 47-55; col. 7, lines

10   46-49] Therefore, Hawryluk discloses using the predetermined relation data to
estimate the first portion of the radiant energy (12') according to the actually detected
second portion of the radiant energy (12"). [Fig. 2; col. 6, lines 41-47; col. 9, lines
25-32] In short, Hawryluk discloses that the mapping between an actually measured
laser power (the second portion of the radiant energy 12" shown in Fig. 2) and an

15   estimated **laser power** (the first portion of the radiant energy 12' shown in Fig. 2). As
Suzuki's laser performance and Hawryluk's predetermined relation data have different
operational characteristics, one for mapping a desired laser power (not measured) to
an estimated current value and the other for mapping an actually measured laser
power to an estimated laser power (not measured), the applicant asserts that a skilled

20   person is not motivated to adopt Hawryluk's memory, configured for storing the
mapping between an actually measured laser power and an estimated laser power, in
Suzuki's circuit for storing the mapping between a desired laser power and an
estimated current value.

Additionally, note is made by the applicant that Suzuki's laser performance is
25   implemented for real-time **power adjustment/calibration in the operational mode**
(paragraphs [0041], [0042], [0056] and [0058]), while Hawryluk's predetermined
relation data is implemented for **power monitoring/estimation in the operational
mode rather than real-time power adjustment/calibration in the operational
mode.** In other words, Suzuki's circuit has a closed loop control for adaptively and
30   dynamically adjusting the magnitude of driving currents for controlling the resultant

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laser power emitted from the laser diode when running in the operational mode, but
Hawryluk's apparatus has no radiant energy adjustment or calibration implemented
therein when running in the operation mode. In short, Hawryluk's apparatus merely
monitors the radiant energy and then outputs the monitored results (Fig. 5; col. 11,

5   lines 9-55). As the operations of Suzuki and Hawryluk belong to different technical
fields, one for real-time power adjustment/calibration and the other for power
monitoring/estimation, and the problems to be solved are different, the applicant
further asserts that a person of ordinary skill in the art is not motivated to make the
proposed substitution, combination, or modification for using the Hawryluk's memory

10   in Suzuki's circuit to store Suzuki's laser performance when having the cited
references before him/her.

        Another note is made by the applicant that Hawryluk teaches that his invention is
directed to monitoring radiant energy supplied to a substrate to anneal integrated
devices or circuits formed thereon, or to expose a resist layer in the performance of

15   photolithography, or to heat a substrate to form silicide contacts ("Field of the
Invention" stated in Hawryluk's disclosure). Therefore, Hawryluk's teaching is
applied to the technical field of **semiconductor process**. However, applicant's
invention is directed to optical recording and storage drives (paragraph [Para 1] of
applicant's disclosure). Therefore, the cited Hawryluk reference is not in the field of

20   applicant's endeavor. Additionally, as stated above, Hawryluk's apparatus is for power
monitoring/estimation. The applicant's invention, however, is for calibrating the
proper output power of a light emitting device (paragraph [Para 1] of applicant's
disclosure). Therefore, the cited Hawryluk reference is not pertinent to the particular
problem with which the applicant is concerned. In accordance with MPEP 2141.01(a),

25   subsection I entitled "TO RELY ON A REFERENCE UNDER 35 U.S.C. 103, IT
MUST BE ANALOGOUS PRIOR ART," the applicant believes that the cited
Hawryluk reference, which is relied on for the rejections, is **not qualified as prior art
available under 35 U.S.C. 103(a)**.

        Yet another note is made by the applicant that Suzuki's circuit provides a

30   real-time power adjustment/calibration because of the closed loop control

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implemented therein (Fig. 1). Suzuki teaches that the laser performance,
Performance=$(P2-P1)/(IP2-IP1)$, is obtained from one control input signal IP2 when
the laser diode generates a light beam having the second light intensity level P2, and
the other control input signal IP1 when the laser diode generates a light beam having
5   the first light intensity level P1. As a result, when either of the control input signals IP1
and IP2 is adjusted due to the comparison result (paragraphs [0040], [0041], and
[0044] of Suzuki's disclosure), the current laser performance has to be updated;
otherwise, the control signal IP3 estimated using the erroneous laser performance fails
to drive the laser diode to emit the third light intensity level P3 as desired. As Suzuki's
10   laser performance requires frequent and dynamical updating, storing the computed
laser performance in the non-volatile memory for permanent storage when the
real-time power adjustment/calibration is active is meaningless and against common
knowledge owned by those skilled in the pertinent art. The applicant therefore asserts
that a skilled person is not motivated to adopt Hawryluk's memory in Suzuki's circuit
15   for storing the laser performance taught by Suzuki.

In light of above statements, the applicant asserts that the claimed feature "a
non-volatile memory for storing the power relationship determined by the
microprocessor" is neither taught nor suggested by the cited references, alone or in
combination.
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Claims 50-59

Claims 50-59 are dependent upon claim 49, and should be allowed if claim 49 is
found allowable.

25   Claim 60

In light of above statements under Claim 49, the applicant asserts that the
claimed limitation "storing the power relationship determined during the calibration
mode in a non-volatile memory" is neither taught nor suggested by the cited
references, alone or in combination.
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Claims 61-70

    Claims 61-70 are dependent upon claim 60, and should be allowed if claim 60 is found allowable.

5   Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Sincerely yours,

10   Date: 08.29.2007

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